

Wake County Natural Areas Inventory

LAKE JOHNSON NATURE PARK

Site Number: 28

Size: about 145 acres

Site Significance: County

Quadrangle: Raleigh West

Ownership: City of Raleigh, private

SIGNIFICANT FEATURES: This natural area contains a very small population of the Significantly Rare bigleaf magnolia (*Magnolia macrophylla*), apparently the only known site of this tree in the eastern Piedmont of the state. The site contains scattered longleaf pines (*Pinus palustris*) and also contains a rare Piedmont Boggy Streamhead natural community.

LANDSCAPE RELATIONSHIPS: The site is located in the southwestern portion of Raleigh, about 1.5 miles upstream (west) of the Lake Raleigh Hardwood Forest.

SITE DESCRIPTION: Lake Johnson is a City-owned reservoir that was formerly a water supply for the city. The lake is surrounded by the Lake Johnson Nature Park, also owned by the City of Raleigh. The natural area consists of only a small portion of the Nature Park, and a very small section of the natural area apparently lies on private property. The site consists of several very small and gentle ravines just south of Lake Johnson. The soil is quite acidic, judging from the plant species present. Along the streams are seepage and boggy spots with many ferns in abundance. The hardwood forest, much of which is good quality Mesic Mixed Hardwood Forest natural community, contains American beech (*Fagus grandifolia*), tuliptree (*Liriodendron tulipifera*), and various oaks, among other canopy species. Common in the understory near the streams is umbrella magnolia (*Magnolia tripetala*).

East of Avent Ferry Road (SR 1321) are several fairly small bigleaf magnolias (*Magnolia macrophylla*). (A large bigleaf magnolia died a few years ago.) Just south of the magnolia area, along a small creek just north of the Raleigh Beltline (I-440), is a rare Piedmont Boggy Streamhead natural community. Plants of Coastal Plain affinities are present. Cinnamon fern (*Osmunda cinnamomea*) is common and robust, up to 4-5' tall. Cane (*Arundinaria gigantea*) is common. Royal fern (*Osmunda regalis*), New York fern (*Thelypteris noveboracensis*), netted chain-fern (*Woodwardia areolata*), and Jack-in-the-pulpit (*Arisaema triphyllum*) carpet the ground. The shrub layer is also very dense near the creek. Wild raisin (*Viburnum nudum*), coastal fetterbush (*Leucothoe racemosa*), and highbush blueberry (*Vaccinium corymbosum*) are widespread. Other shrubs include common winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), elderberry (*Sambucus canadensis*), bayberry (*Myrica heterophylla*), and sweetbay magnolia (*Magnolia virginiana*). Dangleberry (*Gaylussacia frondosa*) is common away from the creek, and yellowroot (*Xanthorhiza simplicissima*) is common on the creek banks. Surprisingly, umbrella magnolia is numerous; this species is more typical of mesic Piedmont slopes than a Coastal Plain boggy streamside. Bamboo-vine (*Smilax laurifolia*) sprawls over some shrubs and trees but is not common. The rarest plant here may be poison-sumac